NewsRelease

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Langley Research Center
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NASA Langley Story Opportunities – February 2001

NASA creating immersive, multi-sensory virtual workplace. The latest NASA vision is to take vision to the next level in the workplace. The Space Agency has taken a virtual leadership role by rethinking the way it designs and develops aerospace missions and hardware. The goal of the Intelligent Synthesis Environment (ISE) program is to develop the capability for engineers and others at different, widely-dispersed locations to work together in an immersive, multi-sensory virtual environment. Using computer simulations to model a complete mission, process or design, researchers can visualize problems before producing a physical product or starting a process. Sometimes referred to as an engineering "holodeck," the15-year ISE program is aimed at shortening design cycle times and increasing quality and productivity while reducing costs. Interviews and images are available upon advance request. Contact: Bill Uher, (757) 864-3189, w.c.uher@larc.nasa.gov

Launch of Mars Odyssey coming soon. The Mars Odyssey spacecraft is set for launch April 7 and is scheduled to arrive at Mars in late October. Mars Odyssey is designed to map the surface of the red planet in more detail than ever before, identifying minerals and recording surface form and structure. NASA Langley experts are already working to support the critical 45-70 day aerobraking phase of the mission, where the spacecraft gradually dips into the Martian upper atmosphere and guides itself to the desired orbit. Langley is developing a precise simulation and other detailed scientific information to ensure a successful aerobraking maneuver. NASA's Jet Propulsion Laboratory leads the overall Mars Odyssey mission. Contact: Ivelisse Gilman, 757-864-5036, i.gilman@larc.nasa.gov

Space effects experiment ready for transport to launch center.
Langley's MISSE (Materials International Space Station Experiment) will be shipped to the Kennedy Space Center at the end of February where it will begin preparations for its flight to the International Space Station this summer. The experiments will investigate the effects of radiation and other environments on materials which are candidates for future spacecraft. Contact: Ivelisse Gilman, 757-864-5036, i.gilman@larc.nasa.gov

March flights to track increasing Asian emissions. Rapid industrialization and increased energy use in eastern Asia have created a unique opportunity for NASA Langley researchers. The Transport and Chemical Evolution over the Pacific (TRACE-P) project will track man-made gases and emissions from eastern Asia over the western Pacific to better understand its chemical evolution and processes. Scientists will study the pathways of this Asian outflow in a series of flights next month using two NASA aircraft operating from Hong Kong and a U.S. Air Force base in Japan. With fossil fuels as the main source of energy, emissions are expected to increase almost five-fold from 1990 to 2020. TRACE-P will document the atmospheric impact of a major industrial revolution. Contact: Chris Rink, (757) 864-6786, c.p.rink@larc.nasa.gov

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BLACK HISTORY MONTH:

African Americans making aerospace history today. Imagine airplane wings lined with tiny micro-jets that work like bird feathers, programmed to react to any flight situation. African American Anna McGowan is in charge of this work -- called the Morphing Project -- at NASA Langley. Imagine the Space Shuttle having self-healing skin to repair itself when hit by micrometeoroids in space. African American Dr. Joycelyn Harris leads this out-of-this-world effort. These are just a few of the plans underway for future technologies. Twenty years from now, airplane wings will morph into bird-like structures (imitating bird wings) using advanced composite materials now being investigated for air and spacecraft. Today, African Americans at NASA Langley are creating the technologies for tomorrow. Interviews and video b-roll available. Contact: Kimberly W. Land, (757) 864-9885, k.w.land@larc.nasa.gov

NASA Langley reaches out to kids by the millions on TV. NASA Langley's Office of Education produces award-winning children's programs as part of their distance learning initiative. "NASA CONNECT" and "Why? Files" are a series of standards-based, instructional programs designed to improve the math, science and technology skills of students in grades 1-8. With an estimated audience of over ten million adolescent viewers worldwide, NASA CONNECT and Why? Files are broadcast via PBS stations and the Internet. The shows feature educators and students from across the United States. Langley researchers provide expert scientific and technical advice for the series, often appearing as guests. Upcoming programs feature international martial arts actor, Jackie Chan, NASCAR's Jeff Gordon and NBC's Today Show weatherman, Al Roker. Visit http://edu.larc.nasa.gov/ to find out what's scheduled for the new season. Interviews and video b-roll available. Contact: Kimberly W. Land, (757) 864-9885, k.w.land@larc.nasa.gov

Take a virtual Space Station tour. Take a 3D tour of the International Space Station by visiting the Virtual International Space Station. Produced by Langley researcher Pat Troutman with help from a group of teenage students, "Virtual ISS" is imbedded with information pertaining to ISS capabilities and opportunities. Contact: Ivelisse Gilman 757-864-5036, i.gilman@larc.nasa.gov, or see http://nike.larc.nasa.gov/viss.html

Looking ahead:

March speaker: Could there be oxygen on Mars?

Our ability to adapt to new environments by using natural resources available for our consumption is critical to our existence and where we live. This is also true for the human exploration of Mars. Dr. K. R. Sridhar, a former NASA scientist, believes producing fuels and life-support consumables using natural resources found in the Martian atmosphere can reduce the costs and risks of pioneering human missions and lay the foundation for permanent settlements. Sridhar, professor of Aerospace and Mechanical Engineering at the University of Arizona in Tucson, AZ will present “Oxygen Production on Mars” at a colloquium at 2 p.m., Tuesday, March 13 at NASA Langley’s H.J.E. Reid Conference Center. Members of the media will have an opportunity to interview Dr. Sridhar at a 1:15 p.m. media briefing. This talk will not be repeated in the evening. Contact: Kimberly W. Land, (757) 864-9885; k.w.land@larc.nasa.gov

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